

REMARKS

This application has been carefully reviewed in light of the Office Action dated January 29, 2003 (Paper No. 21). Claims 2, 5 to 8, 10 and 19 to 24 are in the application, of which Claims 2, 5, 8 and 21 are independent. Reconsideration and further examination are respectfully requested.

The Office Action lodged formal objections against Claims 6 and 10, which have been attended to by amendment herein. Other changes have been made to the claims to correct formal matters; in particular, it will be noted that the amendment to Claim 2 corrects an inadvertent omission of language otherwise found in the appendix supplied with the Amendment dated October 24, 2002.

Claims 8 and 10/8 were rejected under 35 U.S.C. § 102(b) over European 756,935 (Ono); Claims 2, 5, 10/(2,5) and 23 were rejected under § 102(b) over European 709,211 (Boyd); and Claims 6, 7, 19 to 22 and 24 were rejected under § 103(a) over U.S. Patent 5,509,140 (Koitabashi) in view of Boyd. The rejections are respectfully traversed.

The invention concerns use of a fiber material as an absorbent contained in a housing of an ink tank. In making the invention, the inventors specifically avoided the use of an absorbent made of a foaming member such as a polyurethane foaming member, since they found that a foreign material might be eluted from the absorbent due to long-term contact with ink. Accordingly, the invention addresses use of a fibrous absorbent.

According to the invention, the absorber has surfaces formed by thermal processing, such as thermoforming, except at least one face that is a cut face that is a non-

thermally processed face. In the context of Claims 2 and 21, this non-thermally processed cut face is positioned in correspondence to a supply port of the ink tank. In Claim 5, the cut face faces a plane having a largest area on the inner surface of the ink tank, whereas in Claim 8 there are two cut faces that are parallel to each other in a fiber direction.

Differences between a thermally formed face and a cut face are manifest, and are described throughout the specification. For example, at lines 6 to 26 of page 5, the inventors describe their finding that when a thermoformed absorbent is cut and used, a condition of the thermoformed surface is different from that of a cut surface, so that an ink supply performance is different for the two, particularly at high ink-supply speeds. Additionally, beginning at line 21 of page 6 and continuing through the next page, the inventors describe their finding that in a case of a fibrous absorbent, a condition of the thermoformed surface is significantly different from that of a cut surface, such that it is preferable to position the cut surface at a face facing a supply port.

The applied art is not seen to disclose or to suggest at least the features of a fibrous ink absorbent with a thermoformed surface and a cut surface, particularly a cut surface positioned as set out in the claims herein.

For example, Ono discloses a fiber that may be used as an absorbent of an ink tank, and further describes that such a fibrous absorbent is thermoformed by molding into a predetermined shape which corresponds to an inner shape of the ink container. However, at lines 34 to 42 of Ono's column 7, Ono specifically mentions that all surfaces of his ink absorber are thermoformed:

“Since the all surfaces of the ink absorber are thermally molded, an ink supply port can be formed in an arbitrary surface, different from the case of the ink absorber using the conventional felt”.

Since all of Ono's surfaces are thermoformed, it stands to reason that Ono does not describe an ink absorber with a cut face, much less a cut face positioned as set out in the claims herein.

The Office Action refers to Ono's Figure 3A as allegedly illustrating a fibrous material with a cut surface. However, Figure 3A does not show a thermoformed fibrous absorbent; rather, Figure 3A shows a process for manufacturing such an absorber. Ono's description of Figure 3A specifically mentions that a fibrous absorbent is cut and thereafter processed by thermoforming all surfaces.

In other words, Ono merely discloses that an entire fibrous material is thermoprocessed into a predetermined shape. Ono is completely silent about the claimed feature of a thermoprocessed fibrous absorbent which also includes a cut surface with the surface positioned as set out in the claims. Accordingly, the § 102 rejection over Ono is erroneous and should be withdrawn.

Boyd discloses a foam member that is thermoprocessed under compression so as to correspond to a space in which an ink absorbent is contained. Since Boyd pertains to a foamed polyurethane, its disclosure is not pertinent to the claims herein which refer to a fibrous material.

Moreover, although it is true that Boyd mentions a cut surface of his polyurethane, Boyd does not disclose any positioning for his cut surface.

Accordingly, since Boyd does not pertain to a fibrous material, and in any event does not disclose positioning for any of his cut surfaces, the § 102 rejection over Boyd is improper and should be withdrawn.

As for the § 103 rejection over Koitabashi in view of Boyd, it is Applicants' understanding that Koitabashi discloses a structure of an ink tank having an ink chamber and an absorbent member chamber that are positioned side-by-side. However, Koitabashi does not disclose or suggest that a fibrous absorbent is thermoprocessed and a cut surface thereof is positioned so as to face a supply port, as otherwise asserted in the Office Action. Moreover, even if Koitabashi were combined with Boyd, the claimed invention would not have been obvious over any permissible combination thereof, since none of the references discloses that a fibrous absorbent is thermoprocessed and a cut surface thereof is thereafter positioned as set out in the claims.

It is therefore respectfully submitted that the claims herein are fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa,
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Respectfully submitted,


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